

Work Order ID 64914-1

Wednesday, December 22, 2010 2:59:13 PM

Page 1

Item ID: D212-725-1-901

Accept

Revision ID:

Item Name: COLLECTIVE BELL CRANK ASSEMBLY

Start Date: 12/22/2010 Start Qty: 4.00

Required Date: 1/7/2011 Req'd Qty: 4.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan:

QC:

Date: 12-22-10

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run Start

Stop

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D212-725-1

Rev G

100

0.00

Small Fab

Memo

0.00

Small Fab

\*\*\*\*Critical Part,MRB decisions on this part may only be performed by DART DE#02. Any changes to the design,manufacturing process,approved operating enviroment,and design loading spectrum will require a review of the fatigue evaluation for this part\*\*\*\*\*

1- Install sleeve and bearing as per dwg  
2- Stake bearing as per dwg

110

QC5- Inspect part completeness to step on W/O

0.00

QC

Memo

0.00

Quality Control

SCRAP

Pto →

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D212-725-1-901 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: / Date: 11/02/07  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: <u>64914-1</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/02/03	100	When Pressing in 170-015-SA sleeve A burr was formed and mared the D4215.	<i>MD</i> 11/02/03	markings are in the critical area as per Dwg. SCRAP no replace	<i>SB</i> 11/02/03	<i>S</i> 11/02/04	<i>MD</i> 11/02/03	<i>S</i> 11/02/03
		First time doing this process & installis sleeves R.C. Process was not correct.						<i>S</i> 11/02/03

NOTE: Date & initial all entries

Order ID 64914



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Wednesday, December 22, 2010 2:59:13 PM

Item ID: D212-725-1-901

Accept



Setup Start



Revision ID:

Stop



Item Name: COLLECTIVE BELL CRANK ASSEMBLY

Start Date: 12/22/2010 Start Qty: 4.00



Cust Item ID:

Required Date: 1/7/2011 Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

Spray Painting per QSI005 4.2

0.00



SprayPaint

Memo

0.00

\*\*\*Mask bearing prior to prime and paint\*\*\*  
1- Prime and paint as per dwg

Spray Painting

130

QC14- Inspect Spray Paint

0.00



QC

Memo

0.00

Quality Control

140

Identify as per dwg & Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging


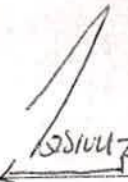


*Scrap*



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/01/01	100	2 120-015-5A sleeve 3 120-013-34 sleeve were scrap because was to big has to fit in the 3012-25-1-901 just by hand not press-fit		- Scrap & destroy - process of manufacturing being revised per attached e-mail				
11/02/01	100	1 120-015-5A sleeve 2 120-013-34 sleeve scraped R&D at manufacturing						

Date &amp; initial all entries

Order ID 64914



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Wednesday, December 22, 2010 2:59:13 PM

Item ID: D212-725-1-901

Accept



Setup Start



Revision ID:

Stop



Item Name: COLLECTIVE BELL CRANK ASSEMBLY

Start Date: 12/22/2010 Start Qty: 4.00



Cust Item ID:

Required Date: 1/7/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150

QC21 - Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

ME  
11-02-03

SCRAO

Monday, December 22, 2010 2:59:17 PM

Work Order ID: 64914



Parent Item: D212-725-1-901



Parent Item Name: COLLECTIVE BELL CRANK ASSEMBLY

Start Date: 12/22/2010

Required Date: 1/7/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A now made in house DD 10.02.08 verified by:JLM IPP Rev:B as per ECN10-532 DD 10.04.08 verified by:JLM Ipp Rev:C Added "Critical Part"Note 10-06-02 Verified By:DD  
 \*\*\*\*Critical Part,MRB decisions on this part may only be performed by DART DE#02.Any changes to the design,manufacturing process,approved operating enviroment,and design loading spectrum will require a review of the fatigue evaluation for this part\*\*\*\*\*

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
120-013-3A  sleeve		Purchased	No			100	Each	40.0000	1	4			
				<u>Location</u>			<u>Loc Qty</u>	<u>Loc Code</u>					
				ST381			40						
				113699			40		4				
120-015-5A  sleeve		Purchased	No			100	Each	40.0000	1	4			
				<u>Location</u>			<u>Loc Qty</u>	<u>Loc Code</u>					
				ST381			40						
				113699			40		4				
D212-725-1-007  COLLECTIVE BELL CRANK		Manufactured	No			100	Each	0.0000	1	4			
MS276433  bearing		Purchased	No			100	Each	40.0000	1	4			
				<u>Location</u>			<u>Loc Qty</u>	<u>Loc Code</u>					
				GA			40						
				113673			40						

B 64913

Wednesday, December 22, 2010 2:59:17 PM

Work Order ID: 64914



Parent Item: D212-725-1-901



Parent Item Name: COLLECTIVE BELL CRANK ASSEMBLY

Start Date: 12/22/2010

Required Date: 1/7/2011

Start Qty: 4.00

Required Qty: 4.00

MS276475

Purchased

No

100

Each

40.0000

1

4



bearing



Location

Loc Qty

Loc Code

GA

40

113673

40



UNCONTROLLED COPY  
SUBJECT TO AMENDMENT

WITHOUT NOTICE  
WORK ORDER

NO. 61914

WIP-01-3

P/N 120-015-5A SLEEVE  
SUITED TO FIT BEARING  
P/N MS27647-5 BEARING  
PRESS FIT

P/N 120-013-3A SLEEVE  
SUITED TO FIT BEARING  
P/N MS27643-3 BEARING  
PRESS FIT

D212-725-1-007  
COLLECTIVE BELLCRANK

D212-725-1-901 COLLECTIVE BELLCRANK ASS'Y

CRITICAL PART  
MRB DECISIONS ON THIS PART MAY ONLY BE PERFORMED BY  
DART DE#02. ANY CHANGES TO THE DESIGN, MANUFACTURING  
PROCESS, APPROVED OPERATING ENVIRONMENT, AND DESIGN  
LOADING SPECTRUM WILL REQUIRE A REVIEW OF THE FATIGUE  
EVALUATION FOR THIS PART.

RELEASED

10-07-31

D212-725-1-007 COLLECTIVE BELLCRANK

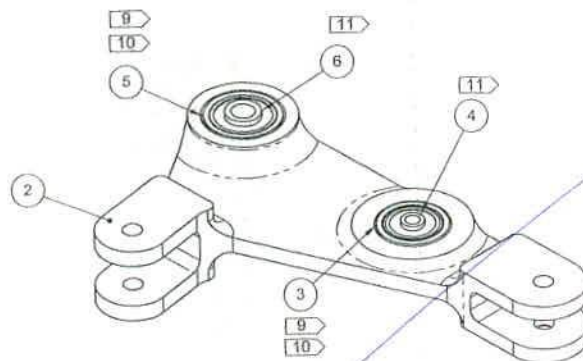
NOTES:

- 1) MATERIAL: 7075-T7351 ALUMINUM  
PER QQ-A-250/12
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME YELLOW PER DART QSI 005 4.2
- 3) LPI PER ASTM 1417 LEVEL 2
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.018 MAX
- 7) IDENTIFICATION: IDENTIFY WITH DART P/N & B/N USING FINE POINT PERMANENT INK MARKER
- 8) WEIGHT: N/A
- 9) SWAGE/STAKE PER QSI 002
- 10) SURFACE FINISH TO BE NO GREATER THAN 80 MICROINCH

DESIGN	DC	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	MP	DRAWING NO.	REV. G
MFG. APPR.	MP	D212-725-1	SHEET 4 OF 84
APPROVED	MP	TITLE	SCALE
DE APPR.	CH	212S DETAIL PARTS	NTS
DATE	10.02.12	COPYRIGHT © 2008 BY DART AEROSPACE LTD	



ITEM	QTY -901	PART NUMBER	DESCRIPTION
1	X	D212-725-1-901	COLLECTIVE BELLCRANK ASS'Y
2	1	D212-725-1-007	COLLECTIVE BELLCRANK
3	1	120-013-3A	SLEEVE
4	1	MS27643-3	BEARING
5	1	120-015-5A	SLEEVE
6	1	MS27647-5	BEARING



### D212-725-1-901 COLLECTIVE BELLCRANK ASSY

**CRITICAL PART**  
MRB DECISIONS ON THIS PART MAY ONLY BE PERFORMED BY DART DE#02. ANY CHANGES TO THE DESIGN, MANUFACTURING PROCESS, APPROVED OPERATING ENVIRONMENT, AND DESIGN LOADING SPECTRUM WILL REQUIRE A REVIEW OF THE FATIGUE EVALUATION FOR THIS PART.

**PRELIMINARY ISSUE**

10.11.08

#### NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: PRIME YELLOW PER DART QSI 005 4.2
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.68 lbs
- 8) SWAGE/STAKE PER QSI 002
- 9) SLEEVE ID AND OD MAY BE ADJUSTED TO PROVIDE PROPER FIT
- 10) SLEEVE SHOULD FIT INTO BELLCRANK USING FINGER PRESSURE ONLY
- 11) BEARING SHOULD FIT INTO SLEEVE USING FINGER PRESSURE ONLY

PA1	NEW ISSUE	RF	10.11.08
REV.	DESCRIPTION	BY	DATE
DESIGN	DC		
DRAWN	RF		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.11.08		

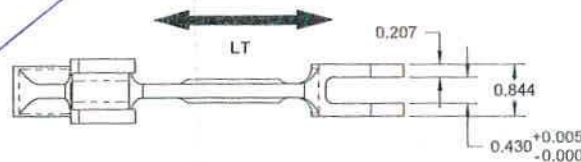
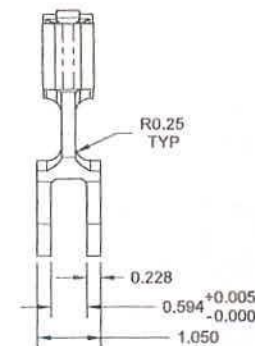
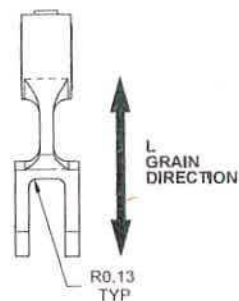
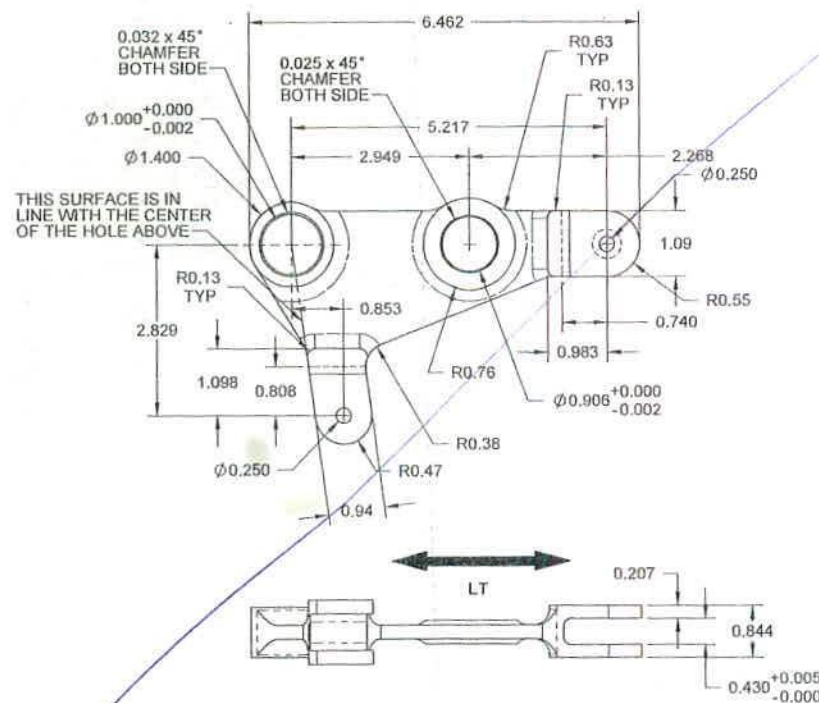
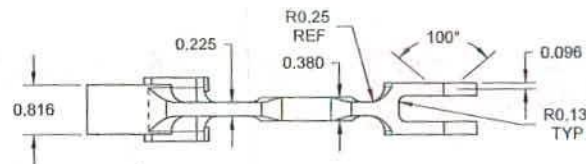
**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4215** REV. PA1  
SHEET 1 OF 2

TITLE **COLLECTIVE BELLCRANK** SCALE  
NTS

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# NOTES:

- 1) MATERIAL: 7075-T7351 ALUMINUM  
PER QQ-A-250/12
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 0.39 lbs
- 8) LPI PER ASTM 1417 LEVEL 2
- 9) SURFACE FINISH TO BE NO GREATER THAN 80 MICROINCH

## D212-725-1-007 COLLECTIVE BELLCRANK

**CRITICAL PART**  
MRB DECISIONS ON THIS PART MAY ONLY BE PERFORMED BY DART DE#02. ANY CHANGES TO THE DESIGN, MANUFACTURING PROCESS, APPROVED OPERATING ENVIRONMENT, AND DESIGN LOADING SPECTRUM WILL REQUIRE A REVIEW OF THE FATIGUE EVALUATION FOR THIS PART.

## PRELIMINARY ISSUE

10.11.08

DESIGN	DC	<b>DART AEROSPACE LTD</b>	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. PA1
MFG. APPR.		D4215	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		COLLECTIVE BELLCRANK	NTS
DATE	10.11.08	COPYRIGHT © 2010 BY DART AEROSPACE LTD	